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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jean-Christophe Giron

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ALEXANDRIA, VA 22314

EXAMINER

STULTZ, JESSICA T

ART UNIT

PAPER NUMBER

2873

NOTIFICATION DATE

DELIVERY MODE

01/26/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/563,322	Applicant(s) GIRON ET AL.	
	Examiner JESSICA T. STULTZ	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 6, 2010 has been entered.

Examiner's Comments

The amendments to claims 1 and 17 overcome the previous objections of these claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 15 (and therefore dependent claims 2-4, 6-14, and 16-22) is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, regarding claim 1, that part of the claim stating "wherein the substrate has a deflection in a longitudinal direction and in a transverse direction" is not supported by the specification or drawings. Specifically, there is no mention that the substrate has a deflection in a longitudinal direction or in a transverse direction. That part of the specification that the applicant

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refers to for support only shows that a large deflection occurs in at least one direction. Therefore for purposes of examination, the assumed meaning is "wherein the substrate has a deflection it at least one direction".

Specifically, regarding claim 15, that part of the claim stating "comprises at least one additional electrochromic functional layer" is not supported by the specification or drawings. Specifically, there is no mention that the device comprises a third electrochromic functional layer in addition to the two layers of claim 1. Therefore for purposes of examination, the assumed meaning is "which acts as a window and transmits or reflects light".

Claim 2-4, 6-14, and 16-22 are rejected since they inherit the lack of support of the claims from which they depend.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 17 and 21, the phrase "a complexity value F" is vague and indefinite since it is not claimed how F is calculated and what factors affect the complexity value. Additionally, the values H, C, and Z are not defined in the specification on pages 6-7 and therefore it is not clear what factors affect the complexity value or how it is determined. Specifically, the Figure 2 does not include all of the points listed in the equations on Page 7 and it is not clear what is measured at the points on the Figure. For purposes of examination it is assumed that the claims refer to a device having a complex non-planar surface. In addition, the

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explanation of the terms in the Remarks is not supported by the specification and/or drawings and thereby can not be used to describe the equation and/or the value "F".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-11, 15-18, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inaba et al US 4,773,741, herein referred to as Inaba '741, in view of Ojeda US 5,981,076, herein referred to as Ojeda '076.

Regarding claim 1, Inaba '741 discloses an electrically controllable device having variable optical/energy properties in transmission or in reflection (Abstract and Column 6, lines 40-68, wherein the device is a display device and therefore has variable transmittance, Figure 4), comprising at least one carrier substrate (20) provided with a stack of electrochromically functional layers (14, 18, 24), including at least two electrochromic active layers (14, 24) separated by an electrolyte (18), wherein the stack is placed between a lower current lead (22) and an upper current lead (12), wherein the lower current lead is positioned nearest to the carrier substrate and the upper current lead is positioned furthest from the substrate (Figure 4), and wherein the stack of functional layers (14, 18, 24) is joined to at least one polymer film (Column 5, line 21-Column 6, line 20, wherein the polymer film comprises polyethylene sheets 34 and 36, Figure 4), wherein the substrate has deflection in at least one direction (Abstract and Column 6, lines 40-68, wherein the device is a display device and thereby inherently has deflection in at

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least on direction, Figure 4) but does not specifically disclose that the at least one polymer film has a percentage shrinkage between 0.6 and 2.0%.

In the same field of endeavor of electro optic devices (Abstract), Ojeda '076 teaches of using at least one polymer film, specifically PMMA or PET films, with a percentage shrinkage between 0.6 and 2.0% (Figure 4, Column 9, line 36-Column 10, line 3). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made for the polymer film of Inaba '741 to have a percentage shrinkage between 0.6 and 2.0% as taught by Ojeda '076 for the purpose of providing UV protection and resistance to outdoor devices (Column 1, line 6-8 and Column 3, lines 15-28).

Regarding claim 2, Inaba '741 and Ojeda '076 disclose and teach of a device as shown above, and Ojeda '076 further discloses that the polymer film birefringent dielectric multilayer film (Column 9, line 36-Column 10, line 3) suitable for reflecting at least 50% of the light within a spectral band of at least 100 nm (Figure 5).

Regarding claims 3-4, 6-7, 15, and 18, Inaba '741 and Ojeda '076 disclose and teach of a device as shown above, but do not specifically disclose that the device comprises one of a vehicle sunroof, which can be actuated autonomously, or a vehicle side window or a rear window, a windscreen or a portion of a windscreen, the top part of a windscreen, the central part of the windscreen, with the aid of automated control of its power supply using at least one camera and/or at least one light sensor, or is in the form of one or more bands along the outline of the windscreen. However, it is well known in the art of electrochromic devices that these devices are used in one of a vehicle sunroof, which can be actuated autonomously, or a vehicle side window or a rear window, a windscreen or a portion of a windscreen, the top part of a

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windscreen, the central part of the windscreen, with the aid of automated control of its power supply using at least one camera and/or at least one light sensor, or is in the form of one or more bands along the outline of the windscreen. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made for the electrochromic device to be in one of the claimed devices for the purpose of blocking unwanted light from a user by reflecting/transmitting different wavelengths of light.

Regarding claims 11, 17, and 21 Inaba '741 and Ojeda '076 disclose and teach of a device as shown above, and Inaba '741 further discloses that the substrate is transparent (Column 4, line 1) but do not specifically disclose that device comprise complex non-planar, or at least partly curved surfaces. However, it has been held that that a mere change in the shape of a device would have been obvious absent persuasive evidence that the claimed configuration is significant, which is the case in the instant application, since there is no evidence that the shape of the device is significant to the invention. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made for the device of Inaba '741 and Ojeda '076 to comprise a complex non-planar or at least partly curved for the purpose of providing curved outside surfaces that provide at least some vision correction to the user.

Regarding claim 8, Inaba '741 and Ojeda '076 disclose and teach of a device as shown above, and Ojeda '076 further teaches that the device comprises one of graphical and/or alphanumeric data display panel, glazing for buildings, a rearview mirror, an aircraft cabin window or windscreen, or a skylight (Column 8, lines 14-48).

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Regarding claim 9, Inaba '741 and Ojeda '076 disclose and teach of a device as shown above, and Ojeda '076 further teaches that the device comprises one of interior or exterior glazing for buildings; a shop showcase or countertop, which may be curved; glazing for the protection of an object of the painting type; a computer antidazzle screen; or glass furniture (Column 8, lines 14-48).

Regarding claim 10, Inaba '741 and Ojeda '076 disclose and teach of a device as shown above, and Inaba '741 further discloses that the device operates in transmission or in reflection (Abstract and Column 6, lines 40-68, wherein the device is a display device and therefore has variable transmittance and thereby reflectance, Figure 4).

Regarding claim 16, Inaba '741 and Ojeda '076 disclose and teach of a device as shown above, and Ojeda '076 further teaches that the percentage shrinkage of the polymer film is between 0.8 and 1.5% (Figure 4).

Regarding claim 20, Inaba '741 and Ojeda '076 disclose and teach of a device as shown above, and Inaba '741 further discloses that the polymer film (36) is a planar or substantially planar film contacting only one surface of a lower conducting layer (22, Figure 3).

Regarding claim 22, Inaba '741 and Ojeda '076 disclose and teach of a device as shown above, and Inaba '741 further discloses that the polymer film (36) has dimensions smaller than those of the layers between which the polymer is positioned (shown in Figure 3).

Claims 12-14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inaba '741, in view of Ojeda '076, as applied to independent claim 1 above, and further in view of Agrawal US 7,300,166, herein referred to as Agrawal '166.

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Regarding claims 12-14, Inaba '741 and Ojeda '076 disclose and teach of a device as shown above, but do not specifically disclose that the device comprises an opaque or opacified substrate or wherein an electronic conductivity of at least one of the active layers is sufficient for replacing the conducting layers with a grid of wires, specifically wherein the conducting wires increase the conductivity of the active layers, in order to guarantee coloration uniformity. In the same field of endeavor of electrochromic devices, Agrawal '166 teaches of a device comprising an opaque or opacified substrate (Column 35, lines 30-59) wherein an electronic conductivity of at least one of the active layers is sufficient for replacing the conducting layers with a grid of wires, specifically wherein the conducting wires increase the conductivity of the active layers, in order to guarantee coloration uniformity (Column 16, line 49-Column 17, line 10 and Column 18, line 38-Column 19, line 18). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teaching of Agrawal '166 with the device of Inaba '741 and Ojeda '076 for the purpose of providing improved electro optic performance and to provide mirrors that provide color in both day and night (Abstract and Column 3, lines 53-64).

Regarding claim 19, Inaba '741 and Ojeda '076 and Agrawal '166 disclose and teach of a device as shown above, and Inaba '741 further discloses a first layer of anodic electrochromic material comprising hydrated iridium oxide or hydrated nickel oxide (Column 4, lines 35-55), which can include one or more other metals, multiple layers, including a cathodic electrochromic layer of tungsten oxide (Column 4, lines 35-55); Agrawal '166 further teaches of a layer of hydrated tantalum oxide or hydrated silicon oxide or hydrated zirconium oxide (column 6, line 40-Column 7, line 23).

Response to Arguments

Applicant's arguments filed January 6, 2010, have been fully considered but they are not persuasive. Specifically, applicant argues that the term "complexity value F" is clear from the specification and drawings, however the examiner disagrees since it is not claimed how F is calculated and what factors affect the complexity value. Additionally, the values H, C, and Z are not defined in the specification on pages 6-7 and therefore it is not clear what factors affect the complexity value or how it is determined. Specifically, the Figure 2 does not include all of the points listed in the equations on Page 7 and it is not clear what is measured at the points on the Figure. Therefore the examiner assumed the intended meaning as shown above. In addition, the explanation of the terms in the Remarks is not supported by the specification and/or drawings and thereby can not be used to describe the equation and/or the value "F". Therefore it is not clear what the intended limitation of the value F places on the claim. The examiner addressed the shrinkage percentage of the polymer film above as taught by Ojeda '076. Additionally, applicant argues that the material is shown as a comparative example; however, the material is cited in Ojeda '076 as being used in an electrochromic device as shown above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA T. STULTZ whose telephone number is (571)272-2339. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jessica T Stultz
Primary Examiner
Art Unit 2873

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